

Hydrogen Sulfide Fact Sheet #2

Fenimore Landfill, Roxbury, Morris County

New Jersey Department of Health (DOH)

The DOH has prepared this fact sheet as an update to the [January 2013 fact sheet](#).

How might I be exposed to hydrogen sulfide from the landfill?

Hydrogen sulfide is a colorless gas with a characteristic odor of rotten eggs. Because hydrogen sulfide gas is being released from the landfill, people living near the landfill may be exposed by breathing it in and people can smell it at low levels. Some people may be more sensitive to hydrogen sulfide odors than others, and can smell it at levels as low as 0.5 parts of hydrogen sulfide in one billion parts of air (ppb).

How likely is hydrogen sulfide to cause cancer?

Hydrogen sulfide has not been shown to cause cancer in humans, and its possible ability to cause cancer in animals has not been studied thoroughly. The U.S. Department of Health and Human Services (DHHS), the International Agency for Research on Cancer (IARC), and the United States Environmental Protection Agency (EPA) have not classified hydrogen sulfide as a cancer causing agent.

Are there any long-term health effects based on exposure to hydrogen sulfide?

Based on the data available at this time, DOH does not believe there will be long-term adverse health effects.

I have seen very high levels on the monitors. How does that affect my health risk?

DOH uses the Minimal Risk Levels (MRLs) developed by the federal Agency for Toxic Substances and Disease Registry to assess the possibility of adverse health effects.

An MRL is an estimate of the daily human exposure to a hazardous substance, at or below which, that substance is unlikely to pose a measurable risk of adverse, non-cancer health effects. Because these levels are established using safety factors that take into account many variables in the general population such as differences in age or weight or height, the actual levels of exposure to a contaminant where adverse health effects would be observed are typically much higher than the stated Minimal Risk Level.

In Roxbury Township, levels of hydrogen sulfide were below the level where there is a risk of adverse health effects for exposure periods of 15 to 365 consecutive days (defined as an *intermediate* MRL). Specifically from February 2013 to August 18, 2013, the maximum average of hydrogen sulfide levels among the monitoring stations was 4.6 ppb. The *intermediate* Minimal Risk Level recognized for hydrogen sulfide is 20 ppb. It should be noted that in the study establishing this 20 ppb MRL there were no adverse health effects observed at 460 ppb.

For shorter exposure periods of less than 15 consecutive days (defined as an *acute* MRL), hydrogen sulfide levels in Roxbury Township have, on several occasions, exceeded the *acute* Minimal Risk Level of 70 ppb. While recent air monitoring data taken in 15-minute intervals from residential neighborhoods indicated levels ranging from 0 to 653 ppb, it should be noted that in the study which established this 70 ppb Minimum Risk Level the actual level where health effects were observed was 2,000 ppb.

As stated above, based on the data available at this time, DOH does not believe there will be long-term adverse health effects from exposure to hydrogen sulfide.

Can I still have symptoms at levels below those identified for when individuals may experience health effects?

People can still experience symptoms when exposed to hydrogen sulfide levels that are lower than the Minimal Risk Level. Reactions to the odor itself may trigger symptoms such as nausea, vomiting, sleep disturbance, loss of appetite, and headache. Since people may smell hydrogen sulfide distinctly at 10 ppb, some people may experience symptoms at this level or even lower.

Who should I talk to if I am concerned about my health or my child's health?

You should begin by discussing your concerns with your physician or your child's pediatrician.

Who can my primary care provider contact for additional environmental health information?

For additional questions, there are clinics that specialize in environmental health that your primary care provider can contact. While the Department of Health does not endorse any one facility, two federally recognized clinics that the Department of Health is working with are:

For adults: The Environmental and Occupational Health Clinical Center in Piscataway, NJ sees adults who have been exposed to contaminants occupationally or environmentally. They can be reached at (848) 445-0123.

For children: Pediatricians can contact the Mt. Sinai Medical Center's Pediatric Environmental Health Specialty Unit in New York at (866) 265-6201.

For general questions: The Department of Health will continue to support DEP as it works to reduce odors at the landfill. For general questions, the DEP hotline number is (609) 341-2875. This hotline is operational during regular business hours 9 a.m. to 5 p.m. To email your questions, residents can contact DEP at:

RoxburyTwpFenimoreQuestions@dep.state.nj.us. In addition, residents who wish to file an odor complaint should call (877) WARNDP. This number is operational 24/7.

http://www.state.nj.us/health/ceohs/documents/hydrogensulfide_factsheet.pdf



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